

WHAT IS CLAIMED IS:

1. A method of driving a liquid crystal display apparatus including a liquid crystal cell of a vertically aligned mode, said method comprising:

(a) correcting a desired target gradation so as to facilitate a gradation transition from a current gradation to the desired target gradation;

(b) judging whether or not a combination of the current gradation and the desired target gradation corresponds to a predetermined first combination which causes a time required for a gradation in a second area of a pixel to reach a second target gradation to become not less than a predetermined second tolerance, when facilitating the gradation transition to such a degree that a gradation in a first area of the pixel does not exceed a predetermined first tolerance indicative of a first target gradation, and which causes the gradation in the second area of the pixel to exceed the first tolerance, when facilitating the gradation transition to such a degree that a time required for the gradation in the first area of the pixel to reach the first target gradation becomes less than the second tolerance;

(c) replacing the desired target gradation with a predetermined first gradation prior to the step (a) such

that a combination of the desired target gradation and a next gradation does not correspond to the first combination irrespective of the next gradation, when the combination of the current gradation and the desired target gradation corresponds to the first combination; and

(d) replacing the current gradation with a predetermined second gradation to be reached by a current gradation transition, prior to the step (a), when a combination of the current gradation and a previous gradation corresponds to the first combination.

2. The driving method as set forth in claim 1, wherein:

the second gradation is set to be equal to the first gradation, and wherein in the step (a), the gradation transition is facilitated such that a gradation, in an area having a relatively slowest response speed among response speeds in respective areas in the pixel, reaches the first gradation, when carrying out a gradation transition to the first gradation.

3. The driving method as set forth in claim 1, wherein:

the liquid crystal cell is for a 256-gradation display,

and

the first gradation is set to 32-gradation, when a greater gradation is required based upon a relatively higher brightness.

4. A driving method of a liquid crystal display apparatus including a liquid crystal cell of vertically aligned mode driven in a normally black mode, said method comprising:

(a) correcting a desired target gradation so as to facilitate a gradation transition from a current gradation to the desired target gradation;

(b) judging whether or not a combination of the current gradation and the desired target gradation corresponds to a predetermined first combination which causes a time required for a gradation in a second area of a pixel to reach a second target gradation to become not less than a predetermined second tolerance, when facilitating the gradation transition to such a degree that a gradation in a first area of the pixel does not exceed a predetermined first tolerance indicative of a first target gradation, and which causes the gradation in the second area of the pixel to exceed the first tolerance, when facilitating the gradation transition to such a degree that

a time required for the gradation in the first area of the pixel to reach the first target gradation becomes less than the second tolerance;

(c) adding a predetermined first value to the desired target gradation prior to the step (a), when the combination of the current gradation and the desired target gradation corresponds to the first combination; and

(d) subtracting a predetermined second value from the current gradation, prior to the step (a), when a combination of the current gradation and a previous gradation corresponds to the first combination.

5. The driving method as set forth in claim 4, wherein:

the liquid crystal cell is for a 256-gradation display, and

when a greater gradation is required as brightness is relatively higher, the first value is set to be not less than -16-gradation and not more than +16-gradation, and the second value is set to be not less than 2-gradation and not more than 16-gradation.

6. The driving method as set forth in claim 4, wherein:

the liquid crystal cell is for a 256-gradation display,
and

when a greater gradation is required as brightness is higher, the first value is set to be not less than 2-gradation and not more than 16-gradation, and the second value is set to be not less than 2-gradation and not more than 12-gradation.

7. The driving method as set forth in claim 1,
wherein:

in the step (b), it is judged to be the first combination, when the current gradation is relatively smaller than a predetermined threshold, the desired target gradation falls within a predetermined range, and the desired target gradation has relatively greater brightness than the current gradation.

8. The driving method as set forth in claim 4,
wherein:

in the step (b), it is judged to be the first combination, when the current gradation is relatively smaller than a predetermined threshold, the desired target gradation falls within a predetermined range, and the desired target gradation has a relatively greater brightness

than the current gradation.

9. The driving method as set forth in claim 7, wherein the threshold and the range are varied in accordance with a panel temperature of the liquid crystal cell.

10. The driving method as set forth in claim 7, wherein:

the liquid crystal cell is for a 256-gradation display,
the threshold is set to 32-gradation when a greater gradation is required as brightness is higher, and
the range falls within a range of not less than 32-gradation and less than 160-gradation.

11. The driving method as set forth in claim 7, wherein:

the liquid crystal cell is for a 256-gradation display,
the threshold is set to 32-gradation when a greater gradation is required as brightness is higher, and
the range falls within a range of not less than 16-gradation and less than 96-gradation.

12. The driving method as set forth in claim 7,

wherein:

the liquid crystal cell is for a 256-gradation display,
and

in a case where a greater gradation is required as brightness is higher, the threshold is set to 32-gradation and the range is set to fall within a range of not less than 32-gradation and less than 160-gradation, when a panel temperature of the liquid crystal cell is less than 15 degrees centigrade, and the threshold is set to 32-gradation and the range is set to fall within a range of not less than 16-gradation and less than 96-gradation, when a panel temperature of the liquid crystal cell is not less than 15 degrees centigrade.

13. The driving method as set forth in claim 1,
wherein:

when a combination of the current gradation and the previous gradation corresponds to a predetermined second combination that causes a shortage in response in spite of facilitating the gradation transition, the steps (c) and (d) are not carried out.

14. The driving method as set forth in claim 4,
wherein:

when a combination of the current gradation and the previous gradation corresponds to a predetermined second combination that causes a shortage in response in spite of facilitating the gradation transition, the steps (c) and (d) are not carried out.

15. A driving method of a liquid crystal display apparatus including coexisting areas with relatively different response speeds, said method comprising:

(a) correcting a desired target gradation so as to facilitate a gradation transition from a current gradation to the desired target gradation; and

(b) adjusting the correcting in the desired target gradation and adjusting the correcting in a next gradation correcting, such that deterioration of display quality due to different response speeds in the respective areas is reduced, when a combination of the current gradation and the desired target gradation corresponds to a first combination that causes the deterioration of the display quality to occur.

16. The driving method as set forth in claim 15, wherein:

in the step (b), the correction in the desired target

correcting is preliminarily carried out such that a transition is carried out to a gradation that causes a gradation, in an area whose response speed is slow, to reach near the desired target gradation in accordance with the correction in the next correcting, and causes display gradations of the entire pixels not to substantially change.

17. The driving method as set forth in claim 15, wherein:

in the step (b),

the correction in the desired target correcting is carried out such that an average of the respective brightness of the entire pixels reaches near the desired target gradation, and

the correction in the next gradation correcting is carried out such that a gradation in an area whose response speed is slow is boosted up to the desired target gradation.

18. A driving apparatus of a liquid crystal display apparatus including a liquid crystal cell of a vertically aligned mode driven in a normally black mode, said driving apparatus comprising:

correction means for correcting a desired target

gradation so as to facilitate a gradation transition from a current gradation to the desired target gradation;

judgment means for judging whether or not a combination of the current gradation and the desired target gradation corresponds to a predetermined first combination which causes a time required for a gradation in a second area of a pixel to reach a second target gradation to become not less than a predetermined second tolerance, when facilitating the gradation transition to such a degree that a gradation in a first area of the pixel does not exceed a predetermined first tolerance indicative of a first target gradation, and which causes the gradation in the second area of the pixel to exceed the first tolerance, when facilitating the gradation transition to such a degree that a time required for the gradation in the first area of the pixel to reach the first target gradation becomes less than the second tolerance;

first replacement means for replacing the desired target gradation with a predetermined first gradation such that a combination of the desired target gradation and a next gradation does not correspond to the first combination irrespective of the next gradation, when the combination of the current gradation and the desired target gradation corresponds to the first combination, and

for supplying the first gradation to said correction means;
and

second replacement means for replacing the current gradation with a predetermined second gradation to be reached by a current gradation transition, when a combination of the current gradation and a previous gradation corresponds to the first combination, the second gradation, and for supplying the second gradation to said correction means.

19. A driving apparatus of a liquid crystal display apparatus including a liquid crystal cell of a vertically aligned mode driven in a normally black mode, said driving apparatus comprising:

correction means for correcting a desired target gradation so as to facilitate a gradation transition from a current gradation to the desired target gradation;

judgment means for judging whether or not a combination of the current gradation and the desired target gradation corresponds to a predetermined first combination which causes a time required for a gradation in a second area of a pixel to reach a second target gradation to become not less than a predetermined second tolerance, when facilitating the gradation transition to

such a degree that a gradation in a first area of the pixel does not exceed a predetermined first tolerance indicative of a first target gradation, and which causes the gradation in the second area of the pixel to exceed the first tolerance, when facilitating the gradation transition to such a degree that a time required for the gradation in the first area of the pixel to reach the first target gradation becomes less than the second tolerance;

first calculation means for adding a predetermined first value to the desired target gradation, when the combination of the current gradation and the desired target gradation corresponds to the first combination, and for supplying an added result to said correction means; and

second calculation means for subtracting a predetermined second value from the current gradation, when a combination of the current gradation and a previous gradation corresponds to the first combination, and for supplying a subtracted result to said correction means.

20. A driving apparatus of a liquid crystal display apparatus including coexisting areas of different response speeds, said driving apparatus comprising:

correction means for correcting a desired target gradation so as to facilitate a gradation transition from a current gradation to the desired target gradation;

adjustment means for respectively adjusting first and second corrections of said correction means, such that deterioration of display quality due to different response speeds in the respective areas is reduced, when a combination of the current gradation and the desired target gradation corresponds to a first combination that causes the deterioration of the display quality to occur, the first and second corrections being consecutively carried out.

21. The driving apparatus as set forth in claim 20, wherein:

said adjustment means preliminarily adjusts the second correction of said correction means such that a transition is carried out to a gradation that causes a gradation in an area whose response speed is relatively slow to reach near the desired target gradation in accordance with an adjustment of the first correction of said correction means, and that causes display gradations of the entire pixels not to substantially change.

22. The driving apparatus as set forth in claim 20, wherein:

said adjustment means adjusts the first correction of said correction means such that an average of the respective brightness of the entire pixels reaches near the desired target gradation, and

said adjustment means adjusts the second correction of said correction means such that a gradation in an area whose response speed is relatively slow is boosted up to the desired target gradation.

23. A program, when run on a computer, adapted to cause the computer to execute the method of claim 1.

24. A program, when run on a computer, adapted to cause the computer to execute the method of claim 4.

25. A program, when run on a computer, adapted to cause the computer to execute the method of claim 15.

26. A computer readable medium including the program of claim 23.

27. A computer readable medium including the

program of claim 24.

28. A computer readable medium including the program of claim 25.

29. A driving apparatus of a liquid crystal display apparatus including a plurality of areas with different response speeds, comprising:

a replacement processing section, adapted to replace gradation data of a target frame with gradation data of a first gradation value when gradation transition from a current frame to the target frame exceeds a gradation transition tolerance, the first gradation value enabling at least one of an increase in response speed and a decrease in undesirable brightness; and

a correction section, adapted to correct at least one of the gradation data and data of a first gradation value of the target frame so as to facilitate a gradation transition from the current frame to the target frame.

30. The driving apparatus of claim 29, further comprising:

second replacement process section, adapted to

replace gradation data of the current frame with gradation data of a second value upon the first replacement section replacing gradation data of the target frame with gradation data of a first gradation value.

31. The driving apparatus of claim 29, wherein the liquid crystal display apparatus is of a vertically aligned mode and of a normally black mode.

32. The driving apparatus of claim 29, wherein the replacement processing section is adapted to replace gradation data of a target frame of at least one pixel of the liquid crystal display apparatus.

33. A method of driving a liquid crystal display apparatus including a plurality of areas with different response speeds, comprising:

replacing gradation data of a target frame with gradation data of a first gradation value when gradation transition from a current frame to the target frame exceeds a gradation transition tolerance, the first gradation value enabling at least one of an increase in response speed and a decrease in undesirable brightness; and

correcting at least one of the gradation data and data of a first gradation value of the target frame so as to facilitate a gradation transition from the current frame to the target frame.

34. The method of claim 33, further comprising:

replacing gradation data of the current frame with gradation data of a second value upon replacing gradation data of the target frame with gradation data of the first gradation value.

35. The method of claim 33, wherein the liquid crystal display apparatus is of a vertically aligned mode and of a normally black mode.

36. The method of claim 33, wherein gradation data of a target frame of at least one pixel of the liquid crystal display apparatus is replaced.

37. A method of driving a liquid crystal display apparatus including a plurality of areas with different response speeds, comprising:

determining whether or not a gradation transition from a current frame to a target frame exceeds a gradation

transition tolerance;

replacing gradation data of the target frame with gradation data of a first gradation value when a gradation transition from the current frame to the target frame is determined to exceed a gradation transition tolerance, the first gradation value enabling at least one of an increase in response speed and a decrease in undesirable brightness; and

correcting at least one of the gradation data and data of a first gradation value of the target frame so as to facilitate a gradation transition from the current frame to the target frame.

38. The method of claim 37, further comprising:

replacing gradation data of the current frame with gradation data of a second value upon replacing gradation data of the target frame with gradation data of the first gradation value.

39. The method of claim 37, wherein the liquid crystal display apparatus is of a vertically aligned mode and of a normally black mode.

40. The method of claim 37, wherein gradation data

of a target frame of at least one pixel of the liquid crystal display apparatus is replaced.

41. A method of driving a liquid crystal display apparatus including a plurality of areas with different response speeds, comprising:

determining whether or not a gradation transition from a current frame to a target frame exceeds a gradation transition tolerance;

adding a first value to the gradation data of the target frame when a gradation transition from the current frame to the target frame is determined to exceed a gradation transition tolerance, the first value enabling at least one of an increase in response speed and a decrease in undesirable brightness; and

correcting at least one of the gradation data and data of a first gradation value of the target frame so as to facilitate a gradation transition from the current frame to the target frame.

42. The method of claim 41, further comprising:

subtracting a second value from the current gradation when the first value is added.

43. The method of claim 41, wherein the liquid crystal display apparatus is of a vertically aligned mode and of a normally black mode.

44. The method of claim 41, wherein gradation data of a target frame of at least one pixel of the liquid crystal display apparatus is replaced.

45. A driving apparatus of a liquid crystal display apparatus including a plurality of areas with different response speeds, comprising:

means for replacing gradation data of a target frame with gradation data of a first gradation value when gradation transition from a current frame to the target frame exceeds a gradation transition tolerance, the first gradation value enabling at least one of an increase in response speed and a decrease in undesirable brightness; and

means for correcting at least one of the gradation data and data of a first gradation value of the target frame so as to facilitate a gradation transition from the current frame to the target frame.

46. The driving apparatus of claim 45, further

comprising:

means for replacing gradation data of the current frame with gradation data of a second value upon replacing gradation data of the target frame with gradation data of the first gradation value.

47. The driving apparatus of claim 45, wherein the liquid crystal display apparatus is of a vertically aligned mode and of a normally black mode.

48. The driving apparatus of claim 45, wherein gradation data of a target frame of at least one pixel of the liquid crystal display apparatus is replaced.

49. A driving apparatus of a liquid crystal display apparatus including a plurality of areas with different response speeds, comprising:

means for determining whether or not a gradation transition from a current frame to a target frame exceeds a gradation transition tolerance;

means for replacing gradation data of the target frame with gradation data of a first gradation value when a gradation transition from the current frame to the target frame is determined to exceed a gradation transition

tolerance, the first gradation value enabling at least one of an increase in response speed and a decrease in undesirable brightness; and

means for correcting at least one of the gradation data and data of a first gradation value of the target frame so as to facilitate a gradation transition from the current frame to the target frame.

50. The driving apparatus of claim 49, further comprising:

means for replacing gradation data of the current frame with gradation data of a second value upon replacing gradation data of the target frame with gradation data of the first gradation value.

51. The driving apparatus of claim 49, wherein the liquid crystal display apparatus is of a vertically aligned mode and of a normally black mode.

52. The driving apparatus of claim 49, wherein gradation data of a target frame of at least one pixel of the liquid crystal display apparatus is replaced.

53. A driving apparatus of a liquid crystal display

apparatus including a plurality of areas with different response speeds, comprising:

means for determining whether or not a gradation transition from a current frame to a target frame exceeds a gradation transition tolerance;

means for adding a first value to the gradation data of the target frame when a gradation transition from the current frame to the target frame is determined to exceed a gradation transition tolerance, the first value enabling at least one of an increase in response speed and a decrease in undesirable brightness; and

means for correcting at least one of the gradation data and data of a first gradation value of the target frame so as to facilitate a gradation transition from the current frame to the target frame.

54. The driving apparatus of claim 53, further comprising:

means for subtracting a second value from the current gradation when the first value is added.

55. The driving apparatus of claim 53, wherein the liquid crystal display apparatus is of a vertically aligned mode and of a normally black mode.

56. The driving apparatus of claim 53, wherein gradation data of a target frame of at least one pixel of the liquid crystal display apparatus is replaced.

57. A program, when run on a computer, adapted to cause the computer to execute the method of claim 33.

58. A computer readable medium including the program of claim 57.

59. A program, when run on a computer, adapted to cause the computer to execute the method of claim 34.

60. A computer readable medium including the program of claim 59.

61. A program, when run on a computer, adapted to cause the computer to execute the method of claim 37.

62. A computer readable medium including the program of claim 61.

63. A program, when run on a computer, adapted to cause the computer to execute the method of claim 38.

64. A computer readable medium including the program of claim 63.

65. A program, when run on a computer, adapted to cause the computer to execute the method of claim 41.

66. A computer readable medium including the program of claim 65.

67. A program, when run on a computer, adapted to cause the computer to execute the method of claim 42.

68. A computer readable medium including the program of claim 67.

69. A method of driving a liquid crystal display apparatus including a plurality of areas with different response speeds, comprising:

sensing a temperature of at least a portion of the liquid crystal apparatus; and

determining which of a first and second submethod to execute based upon the temperature sensed,

wherein the first submethod includes

determining whether or not a gradation transition from a current frame to a target frame exceeds a gradation transition tolerance,

replacing gradation data of the target frame with gradation data of a first gradation value when a gradation transition from the current frame to the target frame is determined to exceed a gradation transition tolerance, the first gradation value enabling at least one of an increase in response speed and a decrease in undesirable brightness, and

correcting at least one of the gradation data and data of a first gradation value of the target frame so as to facilitate a gradation transition from the current frame to the target frame, and

wherein the second submethod includes

determining whether or not a gradation transition from a current frame to a target frame exceeds a gradation transition tolerance,

adding a first value to the gradation data of the target frame when a gradation transition from the current frame to the target frame is determined to exceed a gradation transition tolerance, the first value enabling at least one of an increase in response speed and a decrease in undesirable

brightness, and

correcting at least one of the gradation data and data of a first gradation value of the target frame so as to facilitate a gradation transition from the current frame to the target frame.

70. The method of claim 69, wherein the first submethod further includes

replacing gradation data of the current frame with gradation data of a second value upon replacing gradation data of the target frame with gradation data of the first gradation value.

71. The method of claim 69, wherein the liquid crystal display apparatus is of a vertically aligned mode and of a normally black mode.

72. The method of claim 69, wherein gradation data of a target frame of at least one pixel of the liquid crystal display apparatus is replaced.

73. The method of claim 69, wherein the second submethod includes

subtracting a second value from the current gradation

when the first value is added.

74. A program, when run on a computer, adapted to cause the computer to execute the method of claim 69.

75. A computer readable medium including the program of claim 74.

76. A driving apparatus of a liquid crystal display apparatus including a plurality of areas with different response speeds, comprising:

a temperature sensor, adapted to sense a temperature of at least a portion of the liquid crystal apparatus; and

means for determining which of a first and second subsystem to utilize based upon the temperature sensed,

wherein the first subsystem includes

means for determining whether or not a gradation transition from a current frame to a target frame exceeds a gradation transition tolerance,

means for replacing gradation data of the target frame with gradation data of a first gradation value when a gradation transition from the current frame to the target frame is determined to exceed a gradation transition tolerance, the first gradation value enabling

at least one of an increase in response speed and a decrease in undesirable brightness, and

means for correcting at least one of the gradation data and data of a first gradation value of the target frame so as to facilitate a gradation transition from the current frame to the target frame, and

wherein the second subsystem includes

means for determining whether or not a gradation transition from a current frame to a target frame exceeds a gradation transition tolerance,

means for adding a first value to the gradation data of the target frame when a gradation transition from the current frame to the target frame is determined to exceed a gradation transition tolerance, the first value enabling at least one of an increase in response speed and a decrease in undesirable brightness, and

means for correcting at least one of the gradation data and data of a first gradation value of the target frame so as to facilitate a gradation transition from the current frame to the target frame.

77. The driving apparatus of claim 76, wherein the

first subsystem further includes

means for replacing gradation data of the current frame with gradation data of a second value upon replacing gradation data of the target frame with gradation data of the first gradation value.

78. The driving apparatus of claim 76, wherein the liquid crystal display apparatus is of a vertically aligned mode and of a normally black mode.

79. The driving apparatus of claim 76, wherein gradation data of a target frame of at least one pixel of the liquid crystal display apparatus is replaced.

80. The driving apparatus of claim 76, wherein the second subsystem includes

means for subtracting a second value from the current gradation when the first value is added.

81. A liquid crystal television including a liquid crystal display apparatus and the driving apparatus of claim 18.

82. A liquid crystal television including a liquid

crystal display apparatus and the driving apparatus of claim 19.

83. A liquid crystal television including a liquid crystal display apparatus and the driving apparatus of claim 20.

84. A liquid crystal television including a liquid crystal display apparatus and the driving apparatus of claim 29.

85. A liquid crystal television including a liquid crystal display apparatus and the driving apparatus of claim 45.

86. A liquid crystal television including a liquid crystal display apparatus and the driving apparatus of claim 49.

87. A liquid crystal television including a liquid crystal display apparatus and the driving apparatus of claim 53.

88. A liquid crystal television including a liquid

crystal display apparatus and the driving apparatus of claim 76.

89. The driving method as set forth in claim 33, wherein:

when a combination of the current gradation and the previous gradation corresponds to a predetermined second combination that causes a shortage in response in spite of facilitating the gradation transition, the step of replacing gradation data of the target frame is not carried out.

90. The driving method as set forth in claim 34, wherein:

when a combination of the current gradation and the previous gradation corresponds to a predetermined second combination that causes a shortage in response in spite of facilitating the gradation transition, the steps of replacing gradation data of the target and current frames are not carried out.

91. The driving method as set forth in claim 37, wherein:

when a combination of the current gradation and the previous gradation corresponds to a predetermined second

combination that causes a shortage in response in spite of facilitating the gradation transition, the step of replacing gradation data of the target frame is not carried out.

92. The driving method as set forth in claim 38, wherein:

when a combination of the current gradation and the previous gradation corresponds to a predetermined second combination that causes a shortage in response in spite of facilitating the gradation transition, the steps of replacing gradation data of the target and current frames are not carried out.

93. The driving method as set forth in claim 41, wherein:

when a combination of the current gradation and the previous gradation corresponds to a predetermined second combination that causes a shortage in response in spite of facilitating the gradation transition, the step of adding is not carried out.

94. The driving method as set forth in claim 42, wherein:

when a combination of the current gradation and the previous gradation corresponds to a predetermined second

combination that causes a shortage in response in spite of facilitating the gradation transition, the steps of adding and subtracting are not carried out.

95. A liquid crystal television, comprising:

the driving apparatus as set forth in claim 18;

the liquid crystal display apparatus, adapted to be driven by said driving apparatus; and

selection means for selecting a channel of a television broadcasting signal, and for supplying a television image signal of a selected channel to said driving apparatus so as to specify a gradation of the respective pixels.

96. A liquid crystal television, comprising:

the driving apparatus as set forth in claim 19;

the liquid crystal display apparatus, adapted to be driven by said driving apparatus; and

selection means for selecting a channel of a television broadcasting signal, and for supplying a television image signal of a selected channel to said driving apparatus so as to specify a gradation of the respective pixels.

97. A liquid crystal television, comprising:
the driving apparatus as set forth in claim 20;
the liquid crystal display apparatus, adapted to be driven by said driving apparatus; and
selection means for selecting a channel of a television broadcasting signal, and for supplying a television image signal of a selected channel to said driving apparatus so as to specify a gradation of the respective pixels.

98. A liquid crystal monitor, comprising:
the driving apparatus as set forth in claim 18;
the liquid crystal display apparatus, adapted to be driven by said driving apparatus; and
processing means for processing a monitor signal indicative of an image to be displayed by said liquid crystal display apparatus, and for outputting a processed monitor signal to said driving apparatus.

99. A liquid crystal monitor, comprising:
the driving apparatus as set forth in claim 19;
the liquid crystal display apparatus, adapted to be driven by said driving apparatus; and
processing means for processing a monitor signal

indicative of an image to be displayed by said liquid crystal display apparatus, and for outputting a processed monitor signal to said driving apparatus.

100. A liquid crystal monitor, comprising:

the driving apparatus as set forth in claim 20;

the liquid crystal display apparatus, adapted to be driven by said driving apparatus; and

processing means for processing a monitor signal indicative of an image to be displayed by said liquid crystal display apparatus, and for outputting a processed monitor signal to said driving apparatus.

101. The driving apparatus as set forth in claim 20, wherein:

said adjustment means switches and selects one of first and second operations in accordance with a panel temperature of a liquid crystal panel of said liquid crystal display apparatus,

the first operation causes said adjustment means to preliminarily adjust the second correction of said correction means such that a transition is carried out to a gradation that causes a gradation in an area whose response speed is slow to reach near the desired target

gradation in accordance with an adjustment of the first correction of said correction means, and that causes display gradations of the entire pixels not to substantially change, and

the second operation causes said adjustment means to adjust the first correction of said correction means such that an average of the respective brightness of the entire pixels reaches near the desired target gradation, and causes said adjustment means to adjust the second correction of said correction means such that a gradation in an area whose response speed is slow is boosted up to the desired target gradation.

102. A liquid crystal television, comprising:

the driving apparatus as set forth in claim 29;

the liquid crystal display apparatus, adapted to be driven by said driving apparatus; and

a tuner section, adapted to select a channel of a television broadcasting signal, and adapted to supply a television image signal of a selected channel to said driving apparatus so as to specify a gradation of the respective pixels.

103. A liquid crystal television, comprising:

the driving apparatus as set forth in claim 45;

the liquid crystal display apparatus, adapted to be driven by said driving apparatus; and

selection means for selecting a channel of a television broadcasting signal, and for supplying a television image signal of a selected channel to said driving apparatus so as to specify a gradation of the respective pixels.

104. A liquid crystal television, comprising:

the driving apparatus as set forth in claim 49;

the liquid crystal display apparatus, adapted to be driven by said driving apparatus; and

selection means for selecting a channel of a television broadcasting signal, and for supplying a television image signal of a selected channel to said driving apparatus so as to specify a gradation of the respective pixels.

105. A liquid crystal television, comprising:

the driving apparatus as set forth in claim 53;

the liquid crystal display apparatus, adapted to be driven by said driving apparatus; and

selection means for selecting a channel of a

television broadcasting signal, and for supplying a television image signal of a selected channel to said driving apparatus so as to specify a gradation of the respective pixels.

106. A liquid crystal television, comprising:

the driving apparatus as set forth in claim 76;

the liquid crystal display apparatus, adapted to be driven by said driving apparatus; and

selection means for selecting a channel of a television broadcasting signal, and for supplying a television image signal of a selected channel to said driving apparatus so as to specify a gradation of the respective pixels.

107. A liquid crystal monitor, comprising:

the driving apparatus as set forth in claim 29;

the liquid crystal display apparatus, adapted to be driven by said driving apparatus; and

a signal processing section, adapted to process a monitor signal indicative of an image to be displayed by said liquid crystal display apparatus, and adapted to output a processed monitor signal to said driving apparatus.

108. A liquid crystal monitor, comprising:
the driving apparatus as set forth in claim 45;
the liquid crystal display apparatus, adapted to be driven by said driving apparatus; and
signal processing means for processing a monitor signal indicative of an image to be displayed by said liquid crystal display apparatus, and for outputting a processed monitor signal to said driving apparatus.

109. A liquid crystal monitor, comprising:
the driving apparatus as set forth in claim 49;
the liquid crystal display apparatus, adapted to be driven by said driving apparatus; and
signal processing means for processing a monitor signal indicative of an image to be displayed by said liquid crystal display apparatus, and for outputting a processed monitor signal to said driving apparatus.

110. A liquid crystal monitor, comprising:
the driving apparatus as set forth in claim 53;
the liquid crystal display apparatus, adapted to be driven by said driving apparatus; and
signal processing means for processing a monitor

signal indicative of an image to be displayed by said liquid crystal display apparatus, and for outputting a processed monitor signal to said driving apparatus.

111. A liquid crystal monitor, comprising:

the driving apparatus as set forth in claim 76;

the liquid crystal display apparatus, adapted to be driven by said driving apparatus; and

signal processing means for processing a monitor signal indicative of an image to be displayed by said liquid crystal display apparatus, and for outputting a processed monitor signal to said driving apparatus.